Traditional handloom practices of *Nyishi* tribe of Arunachal Pradesh, Eastern Himalaya

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The documentation of traditional handloom practices of *Nyishi* tribe and their cultural attire was done in Papum pare district of Arunachal Pradesh wherein 7 selected villages were surveyed during May 2018 to February 2019 through random sampling with semi-structured questionnaire. *Rubung Ruekio*, a traditional loin loom of *Nyishi* tribe is prepared from locally available resources, viz., *Bambusa tulda*, *B. pallida*, *Dendrocalamus hamiltonii*, *Gmelina arborea*, *Michelia* species and *Terminalia myriocarpa*. Most of the weavers were female and weaved culturally important traditional dresses such as *Pomo gale*, *Dumping gale*, *Jekum/Na me-acham gale*, *Jinjab gale*, *Juhu/Junghang gale* and *Luch/lungch gale* which are worn especially during auspicious occasions. Of these, *Jekum gale*, *Pomo gale* and *Dumping gale* culturally significant. The market price of gale varied tremendously depending on type of raw material and type of handloom used in the production.

**Keywords:** Gale, *Nyishi*, Handloom

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Traditional handloom is an old practice of indigenous community and has been used since time immemorial. Traditionally, loin loom is used for weaving for many centuries. However, due to commercialization of handloom products, fly shuttle loom and jacquard loom are introduced nowadays as these are more efficient and relatively takes less time. At present, there are 4,04,102 loin looms in India that constitute only 15% of total number of looms1. There are about 30,53,691 population involved with handloom industry wherein 72.3% are female1. Cotton, *eri* silk and wool are common yarn used in traditional handloom2-4.

In India, there are about 707 schedule tribes and 145 tribes in North East India. Each tribe has its own cultural identity and traditional dresses5-7. Weaving is considered as an integral part of culture and its knowledge has been passed from one generation to another3-4. In India, majority of handloom artisans are reported from North East India, viz., Arunachal Pradesh, Assam, Manipur, Mizoram, Meghalaya, Nagaland, Tripura and Sikkim states constituting 61% of the total handloom workers of India7. Moreover, 17.8% of total handloom workers belong to Schedule Tribe in India1. Most of them have diverse cultural diversity and also possess unique cultural attires such as shawl, summer clothes, head gear clothes, sleeve less jacket, upper garment, lower garment, etc. with unique motifs, viz., floral, animal, abstract, etc2-4,9-12.

Traditional handloom such as loin loom and throw shuttle loom are an integral part of culture in Assam and Manipur and it becomes an integral part of household13-14. Embroidery is an art and prevalent throughout India in various forms, viz., Aari, Kantha, Pakko, Yoke etc. and needle is commonly used to prepare motifs on various cultural outfits15-19. The weaving of silk saree uses various traditional techniques such as petni, kondi and reku to prepare fabric for manufacturing border, body and pallu20.

Nowadays natural dye are in high demand in handloom products. The use of Batik on cotton yarn is popular wherein *Laccifer lacca*, *Acacia catechu*, *Terminalia chebula*, *Rubia cordifolia* etc. are used for painting on handloom product21,22. The use of *Camellia sinensis var assamica* and *R. cordifolia* as dye have been reported in handloom industries23,24.

Arunachal Pradesh is one of the state of Northeast region of India and is popular worldwide for its

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diverse biological diversity and ethnicity. The state shares international border of 1,628 km with Bhutan in west, China (North and Northeast) and Myanmar (East). There are around 26 major tribes in the state and have diverse traditional attires indicating the unique culture of each tribe. The unique motifs used in cultural outfits distinguish their social status, gender and ethnicity\(^1\). There are about 99,450 different types of looms in this state of which 61.99% are loin looms, 4.12% (frame loom with dobby and jacquard) and 27.69% (pit looms with jacquard and other pit loom) and 6.18% (other types of looms)\(^1\).

Nyishi tribe, one of major tribes of Arunachal Pradesh is distributed in Papum pare, Kurung Kumey, East Kameng, Kra Daadi, lower Subansiri and Kamle districts\(^5\). The women folk are skilled in weaving traditional attires which are especially worn during auspicious occasions like festival (Nyokum) and marriages\(^25\text{-}26\). The male member of the tribe are skilled in handicraft art and prepare handicraft products such as basket, headgear (Byopa), rope, etc. Of these, traditional headgear (Byopa) is used during important socio-cultural events and it also symbolize identity of the tribe\(^26\).

In Arunachal Pradesh, scientific study on traditional handloom practice is reported from Adi tribe\(^2\). The loin loom (Gekong galong) is traditionally used by women folk to prepare Adi bag, shawl, gale, galuk, badu etc\(^2\). The proper documentation of traditional handloom practice is need of the hour in protecting the intellectual property right (IPR) through Geographical indication (GI) and also in preserving the cultural practices of tribe for future generation reference. With these perspectives, the main aim of the study is to document the traditional handloom practices, handloom products like gale and unique motif designs.

**Study Sites**

The present study was carried out in 7 villages of Papum pare district namely Chimpu, Chiputa, Midpu-II, Rono, Sengri, Upper Dobum and Yupia (Fig. 1). The district is situated in 26°55' and 28°40' North
latitude to 92°40’ and 94°21’ East longitude. The geographical area of the Papum pare district is 3,462 sq. km. It is bounded by Kra Daadi district (North), Lower Subansiri district (East), East Kameng district (West) and Assam (South). The Nyishi tribe is the dominant tribe of the selected villages.

Methodology
The study was conducted from May 2018 to February 2019 wherein a semi-structured questionnaire was designed for collecting handloom related information through random sampling. Personal interviews were conducted with the local weavers at household level, private cottage industries, government cottage industries, showrooms, etc. The data were collected from 25 informants from selected villages. Most of the informants were from 20-30 years and 41-50 years. The Prior Informed Consent (PIC) was taken from informants for the present study.

Results and discussion
Traditional handloom practices of Nyishi tribe
The traditional handloom of Nyishi tribe is locally known as Rubung Ruekio. It is a type of loin loom operated by a single weaver and considered as traditional practice of Nyishi tribe. This traditional handloom has many components placed in different positions based on its function during weaving (Table 1, Fig. 2 & Fig. 3). Similar studies are reported from weavers of Karbi and Biate tribes of Meghalaya where traditional fly shuttle wooden looms (Pe-therang) and back strap looms are considered as traditional handlooms2. In Manipur, loin loom (Kwanglyong) is considered as traditional handloom practices however throw shuttle loom and fly shuttle loom are used nowadays9,14,27. In Assam, throw shuttle loom and loin loom are exclusively used however fly shuttle loom is used nowadays due to some difficulty faced in throw shuttle loom13. The local resources are used to prepare traditional handloom by other tribes. Mesua ferrea, Dendrocalamus giganteus, Gmelina arborea, Mallotus phillippensis, Quercus serrata, Pterygota alata etc. are used to make handlooms by Kom tribe of Manipur9. B. spp., Terminalia chebula and Corchorus capsularis etc. are the main local bioresources for handlooms by Adi tribe2. The present study is in agreement with the findings of these workers.

Women weave different types of traditional attires such as jacket, muffler (Tona), gale etc. Among these, Gale is one of the most important cultural attire of Nyishi. It is a traditional dress worn by women especially as lower garment. It is generally made of Eri silk, Muga silk, wool, cotton and even beads. They use different motifs (design) such as Bump, Dumping, Jinjab etc. with different symbols. These

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Table 1 — Different components of Rubung Ruekio.

<table>
<thead>
<tr>
<th>Sl. no</th>
<th>Handloom parts</th>
<th>Description</th>
<th>Plants used</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Ruekio</td>
<td>It is a pair of round wooden stick of suitable length (Its length depend on the size Gmelina arborea).</td>
<td>Dendrocalamus hamiltonii, B. tulda, B. pallida etc.</td>
</tr>
<tr>
<td>2</td>
<td>Neni-lomi</td>
<td>It is a small diameter bamboo stick of suitable length either round or flat shape which are used as an extra warp beam to detect the error in the interlocked warp and employed different take up rate or tension during weaving.</td>
<td>Dendrocalamus hamiltonii, B. tulda, B. pallida etc.</td>
</tr>
<tr>
<td>3</td>
<td>Rubung</td>
<td>It is a medium diameter bamboo stick of suitable length which is served as a lease rod in weaving.</td>
<td>Dendrocalamus hamiltonii, B. tulda, B. pallida etc.</td>
</tr>
<tr>
<td>4</td>
<td>Ninisankyo</td>
<td>It is a small diameter round bamboo stick of suitable length which is used to regulate the threads for weaving.</td>
<td>Dendrocalamus hamiltonii, B. tulda, B. pallida etc.</td>
</tr>
<tr>
<td>5</td>
<td>Taap</td>
<td>It is a wooden plank of suitable length and breadth with one edge thinner and other thicker. It is help to tighten and set the gaping in between the threads.</td>
<td>T. myriocarpa, Gmelina arborea, Michelia sp. etc.</td>
</tr>
<tr>
<td>6</td>
<td>Putul</td>
<td>It is a flat bamboo stick of suitable length and are used to keep the woven cloth stretched horizontally to avoid folding.</td>
<td>Dendrocalamus hamiltonii, B. tulda, B. pallida etc.</td>
</tr>
<tr>
<td>7</td>
<td>Gagar</td>
<td>It is a medium size wooden cuboidal beam of suitable length with depression at both ends. It is used to tie the weaving back strap belt (Fig. 3).</td>
<td>Gmelina arborea.</td>
</tr>
<tr>
<td>8</td>
<td>Taping sankyo</td>
<td>It is a thin bamboo stick where the threads are rolled and used as a throw shuttle.</td>
<td>Dendrocalamus hamiltonii, B. tulda, B. pallida etc.</td>
</tr>
<tr>
<td>9</td>
<td>Gaetah</td>
<td>It is a back strap belt made up of bamboo, clothes and leather, which are kept around the weaver back. This belt helps to create the necessary tension in loom by stretching legs against the foot rest.</td>
<td>Dendrocalamus hamiltonii, B. tulda, B. pallida etc.</td>
</tr>
</tbody>
</table>
motifs are designed based on the shape of objects such as mountains, ornaments, cucumber seeds etc. (Table 2). Each symbol represents cultural significance with different color combinations (Table 2 & Fig. 4).

In Meghalaya, Karbi and Baite tribes also weave female handloom product similar to gale such as Pini-Langtdong & Pini and Puanbum, respectively. The common motifs used in the handloom products were Jambili Athan, Vo Alo, Pipli, Betoh, Mir and Diamond. Kom tribe of Manipur weave lower garment of female like gale called Pumbeng and use animal motifs such as tiger and python图案⁹. Whereas Meetei community generally weave lungi (Khudei), scarf, bed sheet, shawl, etc. and use animal motifs (Lamthang & Lindomayek), insects motifs (Shami-lami phi & Ningkham Khoi), bird motif (Wahong), floral motif (Kundo & Attar gulab)¹⁴,²⁷. In Meghalaya, Karbi tribe uses a generic motif called Jambili Athan in the traditional dress which represents 5 clans of the tribe symbolized by a rod with 5 branches³⁴.

The nomenclature of the Nyishi gales are based on the type of motifs woven on the gale. Women commonly weave two types of gales – (a) gale with single motif like Pomo gale, Dumping gale, Juhu gale, Luch gale etc. and gale with multiple motifs such as Muko-khum, Luch, Putu, Dumping, Juhu etc. In Jekum gale four motifs are used namely Muko-Khum, Luch, Putu and Pomo. Jekum gale is created by the All Nyishi women association locally called Name-acham. It is a common gale designed for all Nyishi tribes residing in different districts of Arunachal Pradesh (Fig. 4 & Fig. 5). This gale is the amalgamation of cultural and traditional values and also symbolizes the unity of Nyishi tribe. Pomo gale is the oldest gale of Nyishi tribe and has higher traditional value. Dumping gale is specifically wear for performing a popular local dance called Rikampada in local festival Nyokum.

Traditionally, motifs are encrypted on the gale simultaneously during weaving. However, in some cases, motifs are embroidery on the plane gale with needles (Fig. 6).

**Market survey of gales**

The price of gale varied from Rs. 1000 to 60,000 in local market and its price mostly depends on various factors such as type of raw material, number of motifs and type of loom (Table 3). Among all gale, Jekum gale is found to be most expensive with market prices from Rs. 8000 to 60,000. The gale is weaved from loin loom using eri silk and takes 20 to 25 days to complete. Nowadays, flying shuttle loom and jacquard loom are utilized due to its high efficiency and can weave gale.
Table 2 — Different types of motifs used in handloom products.

<table>
<thead>
<tr>
<th>Sl. no.</th>
<th>Motif</th>
<th>Material used</th>
<th>Description</th>
<th>Uses</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Bump</td>
<td>Eri, cotton, wool, muga.</td>
<td>It is a long strip of numerous x-shaped symbol found within two parallel line. Sometime it comes with alternately arranged with diamond and x-shaped symbols. This motif is considered one of the oldest motifs and has been used since time immemorial.</td>
<td>It is used for preparing Parhej (shawl) and Gale in border.</td>
</tr>
<tr>
<td>2</td>
<td>Dumping</td>
<td>Cotton, wool, eri, muga.</td>
<td>It is a flower-like shape mostly with two colours either black or red or both. This motif is the imitation of the hairpin (Dumping) wear by the Nyishi women.</td>
<td>It is used for preparing Dumping gale.</td>
</tr>
<tr>
<td>3</td>
<td>Jinjab</td>
<td>Cotton, wool, eri, acrylic, muga, colour beads.</td>
<td>This motif is the imitation of ornament (Jinjab) wear by the Nyishi women.</td>
<td>It is used for preparing Jinjab gale.</td>
</tr>
<tr>
<td>4</td>
<td>Juhu</td>
<td>Cotton, wool, eri, acrylic, muga, colour beads.</td>
<td>It is a bell-shaped motif derived from the ornament of Nyishi tribe.</td>
<td>It is used for making Juhu gale.</td>
</tr>
<tr>
<td>5</td>
<td>Luch</td>
<td>Cotton, wool, eri, acrylic, muga, colour beads.</td>
<td>It is more or less circular in shape multiple colours. This motif is originates from Papum pare district.</td>
<td>It is used for preparing Luch gale and Jekum gale.</td>
</tr>
<tr>
<td>6</td>
<td>Madoli/Putu/ Digla</td>
<td>Cotton, wool, eri, acrylic, muga.</td>
<td>It is a diamond shape motif with various colour combinations. This motif represents the mountain locally called Putu. This design is created by the hill Miri tribe of Kamle district of Arunachal Pradesh.</td>
<td>It is used for preparing Jekum gale.</td>
</tr>
<tr>
<td>7</td>
<td>Moku-khum</td>
<td>Cotton, wool, eri, acrylic, muga.</td>
<td>It has two parallel line strips with dot shape structure at the middle. This motif is derived from the cucumber and dots represent seeds. It is originated from east Kameng district.</td>
<td>It is used for preparing Jekum gale.</td>
</tr>
<tr>
<td>8</td>
<td>Pomo</td>
<td>Cotton, wool, eri, acrylic, muga.</td>
<td>It consists of black and white strip motif arranged alternatively. It is originated from east Kurung kumey district.</td>
<td>It is used for preparing pomo gale, Jekum gale, Jacket and Mufflar (Pomo tona).</td>
</tr>
<tr>
<td>9</td>
<td>Reni/Rayni</td>
<td>Cotton, wool, eri, acrylic, muga, colour beads.</td>
<td>This motif is also an imitation of one of the ornament (Reni/Rayni) of the Nyishi tribe.</td>
<td>It is used for preparing Rayni gale.</td>
</tr>
</tbody>
</table>

Fig. 4 — Important motifs: (a) Juhu, (b) Luch, (c) Jinjab, (d) Dumping, (e) Madoli/Putu, (f) Mokukhum, (g) Bump, (h) Pomo, (i) Reni/Rayni
Fig. 5 (a) — Jekum kochi/Name-acham gale, (b) Bump gale, (c) Juhu/Junghang gale, (d) Luch/Lungch gale, 9e) Pomo gale, (f) Dumping gale, (g) Jinjab gale, (h) Nyishi women in Jekum gale

Fig. 6 — a-c. Nyishi girl embroidering Juhu motifs on gale
relatively in less time of 5 to 7 days. However, its price is relatively lower than loin loom because the quality of handloom products prepared from loin loom is considered to be better quality.

Conclusion

Rubung Ruekio, a culturally important handloom of Nyishi tribe is made up of locally available resources viz., *B. tulda*, *B. pallida*, *Dendrocalamus hamiltonii*, *Gmelina arborea* and *T. myricarpa*. Six types of gales-Pomo gale, Dumping gale, Jekum/Name-acham gale, Jinjab gale, Juhu/Junghang gale and Luch/lungch gale are weaved by Nyishi tribes and used in various socio-cultural occasions. There are seven important motifs used in female garments, viz., *Bump*, *Dumping*, *Jinjab*, *Juhu*, *Luch*, *Madoli/Putu/Digla* and *Moku-khum*. Among all gales, *Jekum gale* is the most expensive and motifs used are distinct which represents place of origin. Thus, gale of Nyishi tribe may be considered for Geographical Indication (GI) to provide legal protection to their intellectual property because of its origin from specific geographical region and high market demand.

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